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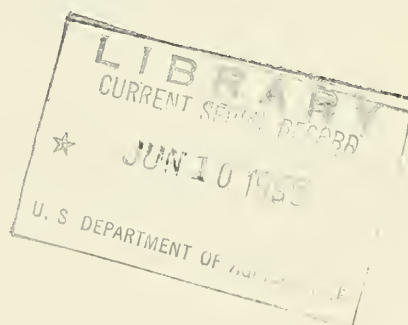


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# MARKETING ACTIVITIES



U. S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

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## MARKETING ACTIVITIES

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# Automatic Box Filler

By Earl W. Carlsen and Joseph F. Herrick, Jr.

An automatic box filler which virtually eliminates labor costs in "loose filling" wood or fibreboard containers in apple packing plants is the latest item of equipment to result from a marketing research project sponsored by the U. S. Department of Agriculture.

Tests of the new machine by marketing research personnel of the Washington State Apple Commission show that it will do these things:

Uniformly fill 3 to 4 boxes of apples a minute or up to 1,600 boxes a day when heavy supplies of fruit are available to the packing line; provide more gentle handling of the apples - with less danger of bruising - than most manual methods of box filling. And, it cuts the usual 4 to 5 cents-a-box cost of manually filling containers to a small fraction of a cent per box.

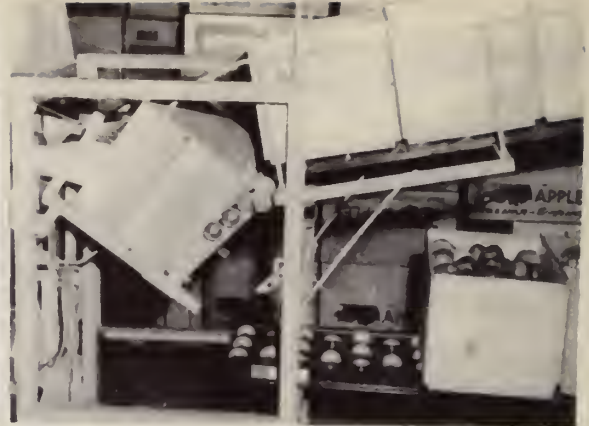
## "Fruitful" Research Project

The new machine is the most recent of several items of packing and handling equipment developed for the apple industry during the course of a two-year research study by the Washington Apple Commission under an Agricultural Marketing Act contract. The contract is administered for USDA by the Transportation and Facilities Branch, Agricultural Marketing Service. As has been the case with most of the other equipment, the new automatic box filler can be adapted to packing operations for some other agricultural commodities. And, in keeping with Department policy to insure that equipment developed during the course of its research will be available to all, a "public use" patent will be sought for the machine.

Included in the other packing and handling equipment developed during the research are a "float-roll" sorting table (MARKETING ACTIVITIES, May 1955), a "return-flow" belt for accumulating fruit from the sizing line (MARKETING ACTIVITIES, March 1955), new apparatus for sizing fruit, a mechanical "high-piler" for stacking and breaking-out boxes and other items of equipment to speed up work and cut packing costs.

Coincidentally, the new automatic box filler meets recently increased requirements of the Northwest apple industry for a device of its type. Volume of loose-packed fruit shipped to market and the prepackaging of apples there has grown considerably in recent years. In the case of prepackaging, the filler is valuable because many apple plants have found it more practical to pack their smaller fruit loose in boxes and transfer it to another plant that specializes in consumer packages.

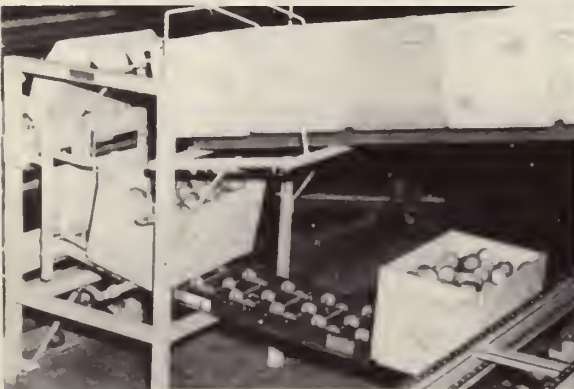




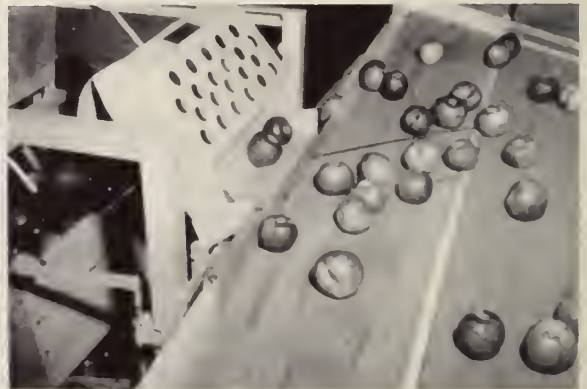
An empty box is just falling into position. The box is beginning to fill. It swings  
It has been released by the empty cradle      downward as the weight of the fruit  
which strikes a catch as it swings forward.      increases.

The automatic box filler is of simple design. Empty boxes slide on gravity conveyors into filling position and full boxes are automatically rolled off by another conveyor below the machine. A solenoid actuated mechanism simultaneously ejects a box when filled and temporarily halts the flow of fruit into the box filling chute.

The filling chute is so designed that it conveys the fruit into a box from the inlet position with a minimum drop. As the box fills, it swings downward to provide room for the additional fruit. When the final weight of a filled box is reached a switch energizes the solenoid which ejects the full box onto a roller conveyor. A supply of empty boxes is provided on a conveyor above the filler and fed by gravity into it. Filled boxes can be accumulated on the gravity conveyor below the machine, or can be run off onto another conveyor for lidding or other operations. The supply of empty boxes feeding into the automatic filler and the disposal of the filled boxes coming off controls the amount of time an operator has to spend at the machine.



The correct weight has been reached and  
the filled box is being ejected from  
the filler.



The raised filling chute stops fruit for only  
3 or 4 seconds while the full box is being  
ejected and an empty one is falling into place.



The automatic box filler can eliminate the manual work of packing apples for delivery loose in containers. It is shown here in a common sizing line replacing a regular tub.

The box filler is here shown working from a return flow belt. The automatic box filler can handle high volumes of fruit such as might occur when working from a belt.

The automatic box filler is designed to fill fruit into either wooden or fibreboard boxes. There is an adjustment to keep the drop of the fruit into the box at a minimum by controlling the rate at which the box swings downward. This adjustment would be used when changing from wooden to fibreboard boxes, or vice versa. Weight of fruit in the box is regulated separately.

#### Test Results Favorable

In trials, it was found that the automatic box filler could operate at a rate of 3 to 4 boxes a minute - only 4 seconds are required for the filled box to be ejected from the machine and an empty one to come into place for filling. The rate of operation depends upon the capacity of the conveyor bringing the fruit to the machine.

The new device fills boxes uniformly. In tests with Winesap apples it was found that the weight of boxes filled on the machine did not vary over one pound. In the sample boxes, 88 percent had the desired weight. Only 6 percent were as much as  $\frac{1}{2}$  pound overweight and a like 6 percent were as much as  $\frac{1}{2}$  pound under the desired weight.

The new automatic box filler was found to be more gentle in handling fruit than most manual methods. On tests with bruise-free apples, only 2 percent additional bruising was caused by the box filler. Were the apples to be packed by hand, it is almost certain that greater bruising would result than in a filling operation using the box filler.

The automatic box filler can make important reductions in apple packing costs. In the Pacific Northwest, it frequently costs 4 to 5 cents to fill apples loose into containers manually from the common type of sizer used in the industry. Inasmuch as it would be possible to have the empty boxes supplied and the filled boxes taken away by power conveyors, the automatic filler could wipe out nearly all direct labor packing costs. However, under most operating conditions in conventional type packing plants, it would be necessary for an operator to tend the mach-



ine 3 or 4 times an hour, renewing the supply of empty boxes and placing the filled boxes onto a conveyor.

The labor cost of tending the machine would be only a small fraction of a cent per box, depending upon whether the worker's time was fully utilized in other plant operations.

In plants where the automatic box filler would be used to pack apples loose in containers for delivery to the market, the packing line often is designed to bring a heavy supply of fruit to a packing station. Under these conditions, it would be possible to pack nearly 1,600 boxes of loose filled apples in one day with one machine. The labor cost would be less than a cent per box.

There are several applications for the filler in the apple industry. As pointed out before, one is in packing apples for delivery loose in wood or fibreboard containers, a method that has assumed increasing importance in the industry in recent years, and another is the use of the machine to increase the efficiency of prepackaging operations since many apple packing plants have found it more efficient to hold their smaller apples loose for later bagging themselves or to transfer them to plants specializing in prepackaging the fruit.

Still another application occurs when growers place small and lower grade fruit back in storage so that the decision to pack for the fresh market or sell to processors can be made at a later, more opportune time as market conditions indicate. In this way, USDA's new box filler not only reduces some of the direct costs of packing apples, but also may lead indirectly to other efficiencies in marketing.



The automatic box filler can replace rough box filling operations such as this.



The automatic filler can substantially reduce the labor cost of manually placing apples loose into boxes as pictured here.



# Merchandising Studies Of Apples, Lettuce, Tomatoes

By Hugh M. Smith and William S. Hoofnagle

What merchandising methods sell the most fresh fruit and vegetables? Will consumers buy more from bulk displays or when the product is prepackaged? Do bulk and prepackaged products side-by-side affect sales? What pricing units are most popular with purchasers of a particular kind of produce? Will consumers pay a premium for prepackaging?

Answers to these and similar questions should help food retailers sell more fresh produce. And, for apples, lettuce and tomatoes, recent marketing research of State Experiment Stations and the U. S. Department of Agriculture has turned up some of this information.

## Cooperative Study

In a joint undertaking by Cornell University Agricultural Experiment Station, the Department of Agricultural Economics of the Pennsylvania State Agricultural Experiment Station and the Market Development Branch of the Agricultural Marketing Service, USDA, a study was made of alternative methods of merchandising apples, lettuce and tomatoes. A national food chain cooperated in the research by making its stores available. Tests were made in 12 supermarket-type retail food stores in an Eastern metropolitan area to measure and evaluate the effectiveness of selected methods of merchandising the three commodities as reflected in consumer purchases. Similar studies are currently being carried out for other agricultural commodities in other supermarkets of the same metropolitan area. Preliminary reports of the results of these later tests will be released as they become available.

## Apples

Two merchandising tests were made for apples in the same sample supermarkets - in the late fall of 1953 and the first half of 1954. Bulk sales were tested against package sales, package sales units were tested in 3- and 5-pound polyethylene bags, and 5 pound polyethylene bags were tested against 5-pound mesh bags. The total volume of sales of each treatment was compared for overall sales effectiveness of each individual merchandising method. Both bulk and bagged apples were sold at the same price.

The results of the 1953 tests were as follows: Eastern apple sales ranged from a high of 20 pounds sold per 100 customers in displays of 5-pound mesh bags, with bulk (that is, a display including both package

and bulk apples), with a 5-pound price unit, to a low of 12 pounds sold per 100 customers in displays of bulk with a 3-pound price unit. Sales from displays of 5-pound mesh bags, with bulk, with a 5-pound price unit were not significantly different from sales from displays of 5-pound polyethylene bags, with bulk, with a 5-pound price unit.

### Later Study

In the apple merchandising experiment conducted early in 1954, the commodity was displayed in combinations of bulk and polyethylene bags (plain and printed), with variations in bag weights and pricing units offered consumers. Of the merchandising methods tested in this experiment, the findings indicated that more apples were sold per 100 customers with a display of plain polyethylene bags with weights varying from 2 to 6 pounds, "catch weight," in combination with bulk, and based on a 3-pound pricing unit. Displays of a printed 5-pound polyethylene bag offered in combination with bulk, and based on a 5-pound pricing unit, resulted in the second largest quantity of sales.

However, among the four merchandising methods tested, a statistically significant difference, at the 5 percent confidence level, prevailed only when the method of displaying apples in a plain polyethylene bag with weights varying from 2 to 6 pounds in combination with bulk and based on a 3-pound pricing unit was compared to the method of merchandising apples in a plain 5-pound polyethylene bag in combination with bulk and based on a 5-pound pricing unit. (A 5-percent confidence level test insures that two methods that are equally successful will be judged significantly different because of observed difference in their means in only 5 percent of cases.)

The data indicate a distinct preference prevails for a choice of 2- to 6-pound "catch weight" bags of apples offered in 3-pound pricing units. In the 1954 test, about 85 percent of the apples were sold in bags when a combination of bulk and bags were displayed. When consumers were offered a choice of bag weights ranging from 2 to 6 pounds, the largest proportion of purchases was made in 3- and 4-pound bags.

Of the total quantity of apples handled during the 1954 test in the experimental stores, 4 percent was lost through spoilage. The largest percentage of this spoilage occurred in bulk display--to a large extent, from customer handling.

### Lettuce

Lettuce was offered consumers by three types of displays--bulk, cellophane bags, and banded, which consisted of a semimetal tape around the head of lettuce. Bulk lettuce was sold at both the 1- and 2-head price. Lettuce in cellophane bags and banded was sold at a unit price announced for all stores. No comparison of methods was made between bulk sales of lettuce at different unit prices. The bulk lettuce display, with a 2-head pricing unit, proved to be the most successful method of merchandising lettuce among those methods tested, based on sales per 100 customers. However, the practice of selling lettuce in cellophane bags



proved almost equally as successful a method of merchandising the product. The difference between these two methods was not statistically significant at the 5-percent confidence level. Both the method of displaying lettuce in bulk, with a 2-head pricing unit, and in cellophane bags, resulted in a greater volume of sales than the method of selling lettuce wrapped with a semimetal band.

Sharp upward changes occurred in the price of lettuce during the period of this experiment. These price increases may have reduced considerably the quantity of lettuce sold per 100 customers but the experiment was so designed as to measure the impact on sales by merchandising methods regardless of the overall quantity sold.

Of the quantity of lettuce handled in the experimental stores, 12 percent was lost through spoilage, with the largest percentage of spoilage occurring prior to display for sale.

### Tomatoes

Merchandising methods for tomatoes included standard cardboard tubes of 3 and 4 tomatoes and plastic tubes affording a full view of the tomatoes at a price premium. Displays offered various combinations of tubes of 3 and 4 tomatoes, with and without bulk. Based on sales per 100 customers, tomatoes in plastic tubes proved to be the most acceptable merchandising method, even with a 3-cent price premium. Although more tomatoes were sold when offered in plastic tubes, there was no statistical significance among differences at the 5-percent confidence level in volume of sales among any of the methods tested.

When a combination display of tomatoes in standard tubes and bulk was offered consumers, 94 percent of the tomatoes were sold in tubes. When plastic tubes were offered in combination with bulk, sales of tomatoes in the tubes increased to 97 percent of all sales.

Spoiled tomatoes accounted for 3 percent of the total quantity handled in the test stores. A much lower percentage of spoilage occurred in the merchandising methods displaying the plastic tubes.

### Retail Store Experiments

The merchandising methods selected for testing were confined to those believed to offer the greatest possibility of bringing about an improved merchandising program for fruits and vegetables. The value of controlled experiments for testing alternative merchandising practices lies in the fact that results indicating the degree of consumer response to different methods may be immediately useful in hastening acceptance of the more efficient and preferred merchandising methods. Information obtained from experimental tests, either positive or negative, may be valuable in eliminating undesirable practices at the retail level which, if allowed to continue, might adversely affect incomes to producers. The controlled experiment at the retail level is particularly useful in a dynamic market situation because consumer reaction to alternative practices can be quickly and accurately measured.



# 3-Cl-IPC

## Sprout Inhibitor

By P. H. Heinze, Paul C. Marth and C. C. Craft

Unsprouted, late-crop Irish potatoes after storage for 8 months at 65 degrees Fahrenheit seem highly improbable, but if you'll look at the illustration at the top of the next page you'll see that it's possible.

These potatoes illustrate the result of research conducted by the Biological Sciences Branch of the Agricultural Marketing Service and the Horticultural Crops Research Branch of the Agricultural Research Service to determine the sprout retarding effects of a chemical compound, better known for its weed killing propensities than as a potato sprout inhibitor. Several varieties of potatoes were used to test the effects of different storage temperatures and to consider concentrations and methods of applying the chemical for best results.

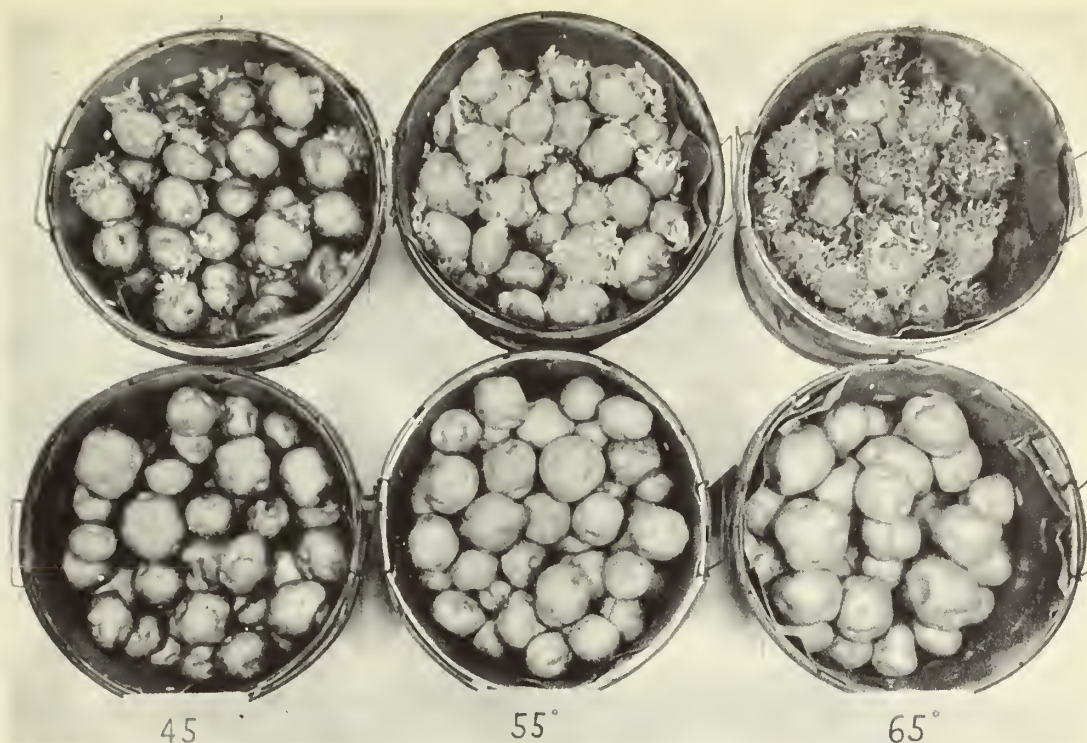
The compound, 3-chloro-isopropyl-N- phenyl carbamate, commonly referred to as 3-Cl-IPC, had been found to be extremely effective in preventing sprout growth in potatoes in previous USDA research.

In the studies discussed here, Chippewa, Irish Cobbler, Katahdin, and Kennebec potatoes grown in Maine and North Dakota were treated with the compound and storage tests were conducted in controlled-temperature rooms at the Department's research center at Beltsville, Md.

One test consisted of momentarily dipping 20-pound samples of potatoes in a 1-percent suspension of 3-Cl-IPC containing a wetting agent. After drying for a few minutes in front of a fan they were packed in  $\frac{1}{2}$ -bushel baskets for storage at 45°, 55°, and 65°F., together with untreated check samples. This test (table 1, page 11) revealed considerably more shrinkage and sprouting in the untreated lots - an average loss of 21 percent for untreated against 10 percent in the treated lots. The high losses for some of the North Dakota lots shown in the table were due primarily to Fusarium rot. Irish Cobblers from the same State which showed a few sprouts were harvested 2 months before testing.

In another test, potatoes were dipped in 0.5 percent solution of 3-Cl-IPC and stored for 7 months at 55°F. with check lots. The results (table 2, page 12) also showed considerably higher shrinkage as well as a trend toward more rotten potatoes in untreated lots. This weaker concentration was as effective as the 1 percent solution in retarding sprouting.

The other major test, treated and untreated potatoes stored for 8 months at 45°F., revealed that all sprouting was effectively controlled by a momentary dip in 1 percent 3-Cl-IPC. Untreated samples again showed a somewhat higher percentage of shrinkage and rot (table 3, page 13).



Irish Cobbler potatoes after storage for 8 months at 45°, 55°, and 65° F. Top row untreated, bottom row dipped in 1 percent 3-Cl-IPC before storage.

TABLE 1. Losses in weight due to shrinkage, rotting, and sprouting in treated and untreated potatoes after storage for 5 months at 65° F.

TREATMENT AND VARIETY	STATE OF ORIGIN	LOSSES DUE TO-		
		SHRINKAGE	ROTTING	SPROUTING
		<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
<b>DIP, 1 PERCENT 3-Cl-IPC:</b>				
Chippewa	North Dakota	18.0	24.0	.0
	Maine	6.7	.8	.0
Irish Cobbler	North Dakota	4.8	1.8	.3
	Maine	4.5	.0	.0
Katahdin	North Dakota	15.7	14.5	.0
	Maine	8.2	.0	.0
Kennebec	North Dakota	5.7	.0	tr
	Maine	9.0	.0	.0
<b>Average</b>		9.1	5.1	tr
<b>NONE (CHECK):</b>				
Chippewa	North Dakota	21.5	20.0	3.8
	Maine	16.5	.0	6.2
Irish Cobbler	North Dakota	11.7	.5	7.0
	Maine	16.0	.0	4.5
Katahdin	North Dakota	23.2	11.7	3.2
	Maine	13.8	.0	5.8
Kennebec	North Dakota	10.0	.0	5.8
	Maine	15.0	.0	6.5
<b>Average</b>		16.0	4.0	5.4

In further studies of Irish Cobblers, a lot dusted with talc containing 3 percent 3-Cl-IPC showed the dust to be as effective as 1 percent dip. Samples placed in baskets lined with kraft paper and covered with paper toweling impregnated with about 3 grams of 3-Cl-IPC revealed that sprouting was inhibited only in tubers next to the towels. Samples dipped in 1 percent 3-Cl-IPC and placed in storage at 80° F. showed no sprout inhibition because the chemical dissipated so rapidly.

At the end of the tests all treated and untreated samples of potatoes were made into chips. No appreciable differences could be detected in chips from treated and untreated tubers. A few samples of treated potatoes appeared to produce slightly lighter colored chips.

### Conclusions

As a sprout inhibitor, 3-Cl-IPC was equally effective on all potato varieties tested in storage at 45°, 55°, and 65° F. Its ineffectiveness on treated tubers stored at 80° F. bears out previous findings that the chemical dissipates rapidly at temperatures above 70° and 75° F.

TABLE 2. Losses in weight due to shrinkage, rotting and sprouting in treated and untreated potatoes after storage for 7 months at 55° F.

TREATMENT AND VARIETY	STATE OF ORIGIN	LOSSES DUE TO-		
		SHRINKAGE	ROTTING	SPROUTING
		<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
<b>DIP, 1 PERCENT 3-Cl-IPC:</b>				
Chippewa	North Dakota	7.5	24.5	.0
	Maine	7.2	.0	.0
Irish Cobbler	North Dakota	4.7	.0	tr
	Maine	5.5	.0	.0
Katahdin	North Dakota	5.7	22.0	.0
	Maine	8.5	.0	.0
Kennebec	North Dakota	5.5	.0	.0
	Maine	8.7	.0	.0
Average		6.7	5.8	.0
<b>DIP, 0.5 PERCENT 3-Cl-IPC:</b>				
Chippewa	North Dakota	6.0	22.0	.0
	Maine	7.2	.0	.0
Irish Cobbler	North Dakota	5.0	6.0	tr
	Maine	5.0	.0	.0
Katahdin	North Dakota	10.0	33.2	.0
	Maine	9.0	.0	.0
Kennebec	North Dakota	6.0	.0	.0
	Maine	9.7	.0	.0
Average		7.2	7.7	.0
<b>NONE (CHECK):</b>				
Chippewa	North Dakota	12.5	39.7	9.5
	Maine	15.2	.0	1.7
Irish Cobbler	North Dakota	12.0	.0	5.2
	Maine	14.5	.0	7.0
Katahdin	North Dakota	10.5	24.7	2.5
	Maine	9.2	.0	1.7
Kennebec	North Dakota	8.5	4.2	5.5
	Maine	12.7	.0	8.0
Average		11.9	8.6	5.1





In storage at 45° or 55° F., potatoes treated with 3-Cl-IPC developed slightly less decay than untreated lots, but at 65° F. treated samples averaged slightly more decay. At 45° and 55° F., the compound seemed to have a slight retarding effect on decay. The potatoes tested were handled with considerable care and were comparatively free of harvest injuries. Further tests of 3-Cl-IPC applied to freshly harvested, slightly injured potatoes may be necessary to definitely determine its effects on decay of tubers in storage.

Potatoes from storage for 5 months at 65° F.; left, dipped in 1 percent 3-Cl-IPC before storage, right, untreated.

The 0.5 percent suspension of the compound was as effective as 1 percent in controlling sprouting in storage at 55° F. The use of lower concentrations may be of considerable importance in meeting residue tolerances if they are established for this compound on potatoes.

TABLE 3. Losses in weight due to shrinkage, rotting and sprouting in treated and untreated potatoes after storage for 8 months at 45° F.

TREATMENT AND VARIETY	STATE OF ORIGIN	LOSSES DUE TO-		
		SHRINKAGE	ROTTING	SPROUTING
		<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
<b>DIP, 1 PERCENT 3-Cl-IPC:</b>				
Chippewa	North Dakota	8.5	24.0	.0
	Maine	6.2	.0	.0
Irish Cobbler	North Dakota	3.0	.0	tr
	Maine	3.0	.0	.0
Katahdin	North Dakota	7.0	23.0	.0
	Maine	6.8	.0	.0
Kennebec	North Dakota	5.7	5.5	.0
	Maine	6.2	.0	.0
Average		5.8	6.6	.0
<b>NONE (CHECK):</b>				
Chippewa	North Dakota	11.7	41.0	4.2
	Maine	6.7	.0	5.0
Irish Cobbler	North Dakota	5.0	.0	3.0
	Maine	6.5	6.5	2.5
Katahdin	North Dakota	10.0	28.7	3.2
	Maine	6.5	.0	3.5
Kennebec	North Dakota	4.8	2.7	3.5
	Maine	7.2	.0	3.5
Average		7.3	9.9	3.6

# NAMO (Atlantic States Division)

"Marketing is the most important phase of Agriculture at the present time."

"Getting crops through marketing channels into the hands of consumers is the real challenge of this particular period in American agriculture."

"The major problem in agricultural marketing now is how, in a system such as we have in the United States, marketing agencies can best serve producers and the private marketing system."

With these statements by three different speakers setting the stage, representatives of State marketing agencies, private trade, and the U.S. Department of Agriculture met here in a 2-day session in mid-April to exchange experiences and information on how agricultural marketing can be improved. The meeting was the annual conference of the Atlantic States Division of the National Association of Marketing Officials. Officials of marketing agencies of 21 States were in attendance. Most of them participated in panel discussions of such agricultural marketing subjects as "Regulation of Grades, Grade Marking, and Licensing," "How to Push a Product," "Whither AMS Marketing Service Projects," "A Glimpse of the New, the Changed or the Treating," and other exchanges of information.

## "No Surplus-Only Underconsumption!"

In describing marketing as the "most important" phase of present day agriculture, Earl L. Butz, Assistant Secretary of Agriculture, called attention to the hunger that exists in two-thirds of the world and stated that there is no "surplus of U.S. food production - only underconsumption in other parts of the world, as well as among parts of our population."

"It is an indictment that we have not had the political finesse to solve this food distribution problem," he stated.

Discussing the \$7.4 billion of food and fiber commodities owned or under loan by the Commodity Credit Corporation and predicting that the total will rise before this summer is over, Mr. Butz declared:

"Something has gone wrong with our distribution system that our production is channeled into Government storage rather than distributed to consumers in this country and throughout the world. Farmers produce for consumption - not for government collection."

The Assistant Secretary pointed out the danger of "tremendous economic power" being concentrated in the hands of CCC and the threat to individual freedom in "Big Government." He urged the state marketing officials to increase their efforts to find the solution to distribution problems at the "grass roots."



"You men on the firing line must get the point across that most of this problem is local and that most of the solution must be local, Mr. Butz stressed. "There is too much running to Washington."

Agricultural marketing was described as a "real challenge" today, by Representative Clifford G. McIntire of Maine who urged the marketing men to keep up to date with all phases of research and other distribution improvements in order to "permit the farmer to compete in the race for the consumer's dollar." He explained that not only are farmers and food marketers competing with other things that make up our standard of living, but the "race" is also between various food commodities.

The speaker stressed the need for objective information as to cost spreads between producers and consumers for food products and held that a better understanding of these costs is needed.

"I strongly urge those in marketing, service and research to constantly direct their attention to marketing efficiencies," he said, "not only in moving better quality products, but that distribution costs be kept at a minimum since a major part of these costs are being absorbed at the producer level."

#### Status Of USDA Appropriations

Oris V. Wells, Administrator, Agricultural Marketing Service, described the marketing problem as how best to serve producers and the marketing system, explaining that "farmers are always looking at us, the trade is always looking at us, and consumers are looking for cheaper food."

Mr. Wells outlined the situation in Congress at the time with respect to marketing research funds in the USDA appropriation bill and explained that Congress was directing the Department to undertake studies of farm living expenses, of possible improvements in crop estimates and a broad study of price spreads between farmers and consumers. He also called attention to the fact that the pending appropriation bill provided \$1,000,000 of Federal funds to match State funds in marketing service work as authorized under the Agricultural Marketing Act of 1946.

Roy Lennartson, Deputy Administrator, AMS, welcomed the meeting to the Department, appreciating that it permitted a meeting of Federal and State officials on mutual marketing problems and an exchange of ideas on marketing improvements. He explained the status of appropriations for market news, grading and inspection and other regulatory work, stressing that today there is "a greater degree of interest in (agricultural) marketing in both the Department and Congress."

Louis A. Webster, Director, Division of Markets, Massachusetts, was Chairman of the conference. At the opening session, W. L. Witte, Wisconsin, NAMO President, announced that the annual meeting of the national group would be held at Madison, Wis., the last 4 days of September, this year. A chronological resume of the conference follows:

A panel on "Regulation of Grades, Grade Marketing and Licensing",



moderated by John J. Dimond, Chief, Regulatory Branch, Fruit and Vegetable Division, AMS, developed considered discussion, particularly as to whether produce dealers should be bonded and how.

Kenneth R. Slamp, Director, Bureau of Markets, Pennsylvania, explained that his state is considering legislation to require dealers to be bonded, but doubted that it could be equitably enforced. Ralph W. Wine, who holds a similar position in Delaware, explained that his state is also considering legislation to require bonding and licensing. He felt that there was a need for bonding to protect producers, although admitting that there would be problems in making a law that would be "fair for all."

Miles A. Nelson, Chief, Bureau of Marketing and Enforcement, Michigan, explained the regulatory program of his state, where grading of a number of fruits and vegetables is compulsory, and said that "a good regulatory job builds up demand for voluntary inspection." Wesley Windish, Chief, Bureau of Markets, Ohio, said that while his State now does not require licensing, he felt that it was coming to provide a check on "fly-by-night" operators. He added that any reasonable enforcement of regulations against misbranded or mislabeled products would have to come from close cooperation of the States and USDA.

### Proposed PACA Changes

Mr. Dimond explained some amendments to the Perishable Agricultural Commodities Act, now under consideration by the Department, which would eliminate the requirement in misbranding cases that "fraudulent purpose" must be proved; would give the Department the right to inspect any produce in a licensed dealer's hands to help verify complaints of misbranding; and to eliminate the necessity of filing a complaint against a dealer and instead give the Department the right to inspect any books and records of a licensee during business hours. From an administrative viewpoint, he was opposed to requiring bonds under the PAC-Act since it would slow down and complicate the issuance of licenses.

In the discussion which followed, Spencer Duncan of the New York Bureau of Markets, F. W. Risher, Assistant Commissioner of Agriculture, Florida and Warren Oley, Director, Division of Markets, New Jersey, explained bonding and licensing provisions of their respective State laws. On a question concerning action by the Department in cases of misbranding, George Grange, Deputy Director, Fruit and Vegetable Division, AMS, explained that if the proposed amendments to PACA go through, more aggressive action than previously possible is contemplated.

Opening the afternoon session of the first day, Robert C. Evans, General Manager, Florida Citrus Commission, gave an interesting presentation of the promotion activities of that organization. Pointing out that Florida orange production jumped from 25.4 million bushels in 1935-36 to 146 million bushels last year, he said that the most important single factor in this expansion was the development of frozen concentrated orange juice. He explained that half of the current orange crop of 145 million bushels is expected to be used for concentrate.

Although families purchasing frozen orange concentrate have more than doubled the amount they use since 1948-49, only about 31 percent of U. S. families are buying the product - leaving plenty of room for expansion, Mr. Evans noted. He explained how the Commission's funds, raised from a levy of less than 2 cents a bushel on oranges, are spent for consumer advertising and merchandising programs.

Fay C. Gaylord, Assistant Chief in Horticulture, Purdue University, heading a panel on "How to Push a Product", listed four essentials for such a program: "a product worth pushing" of uniform quality; a brand or label that will allow consumers to identify it; a promotion and advertising program "that does not have to be too costly" and a program that does not undersell or oversell the product. He described such a program for tomatoes, limited to a 50-mile area, "where the processors did a better merchandising job than could be done for a nationally advertised product."

Mr. Webster described the national promotion program that is done annually for New England cranberries of which Massachusetts produces about 60 percent. He explained that the promotion of cranberries along with poultry had worked out magnificently.

Paul Nystrom, Head, Division of Markets, Maryland, told how tomato canners there and in Delaware and New Jersey have organized to Merchandise their products with a planned 4-point program: (1) Promote canned tomatoes; (2) promote individual canners' brands; (3) prepare promotion kits for canners, brokers and wholesalers to distribute and (4) sales clinics to stress merchandising and exchange selling information.

Mr. Witte described quality improvement and promotion programs undertaken in Wisconsin on dairy products which have been successful, particularly an "Alice in Dairyland" national promotion program. He added that the state is now working with the broiler industry in a program which is showing some results.

#### USDA Market Expansion Activities

Chester Freeman, Chief, Food Trades Branch, Food Distribution Division, AMS, described market expansion work of that agency; a relatively sharp increase in participation in the National School Lunch Program with 11 million children eating school lunches this year; the new special School Milk Program, "off to a good start;" a "record amount" of surplus food moved into consumption through direct distribution during the first 9 months of the fiscal year and the successful operation of the Plentiful Foods Program. For every dollar of Federal assistance to the School Lunch Program, he said, an additional \$3 of State or local funds were spent for food; a total of \$278,000,000 last year.

"One of the important accomplishments of the School Lunch Program," Mr. Freeman explained, "is the introduction of new foods and old foods in new form, which establishes new markets for them." He cited orange concentrate, dry milk and dried eggs as examples. He also told the State marketing men that they could help considerably by carrying the Plentiful Foods Program story into markets not reached by the Department.



The role of the Federal Extension Service in marketing was explained to the conference by Dr. Russell L. Childress, acting Chief, Fruit and Vegetable Marketing and Utilization Branch, Federal Extension Service. Citing the Extension Service's responsibility for developing and carrying out educational and demonstrational programs with growers, handlers and consumers, the speaker added that it is a stupendous job to keep abreast of the new developments and expansion in marketing.

"If we are to attain the highest possible standard of living in the shortest period of time," he said, "our research, service and educational programs must be expanded."

Dr. Childress pointed out that of the \$44 billion retail value of agriculturally produced foods about \$35 billion, or 55 percent of the consumers's food dollar, goes for marketing services beyond the farm. He held that therefore "any substantial improvements in marketing must come from work with handlers of food crops."

In conclusion, Dr. Childress read a statement adopted by committees representing State Departments of Agriculture and Bureaus of Markets, State Extension Services, and State Experiment Stations at Madison, Wis., last fall, recommending an integrated program for the solution of marketing problems and outlining procedures to attain it.

#### Need to put Marketing Research to Work

Discussing "Opportunity vs. Responsibility with AMA Projects," W. C. Crow, USDA Liaison Officer with State Departments of Agriculture and Chief, Transportation and Facilities Branch, AMS, described a number of research projects that have reduced marketing costs, adding: "the results are there, what is needed is someone to take them to the field and put them to work." He asked the State marketing officials to consider the assigning of personnel to this work, "since you have the contacts with marketing people and are in a good position to render this service." Research results are worthless unless they are put to use, he emphasized.

Other opportunities for State agencies to improve marketing cited by Mr. Crow were: showing producers varieties and packages preferred in the markets; demonstrating best methods of grading, packing and packaging; expanding outlets for surplus products; bringing together statistical data including crop reports and market news; and showing marketing groups how to maintain product quality. He praised most States for improving their marketing programs and grasping opportunities afforded them under the AM-Act matched-fund projects, adding that USDA is following a policy of putting Federal funds into States which do the best jobs and withholding funds from projects not producing worthwhile results.

A panel discussion of the outlook for AMA marketing service projects was led by Leighton Foster, Chief Marketing Specialist, Liaison Office State Departments of Agriculture, AMS.

George Chick, Chief, Division of Markets, Maine, discussing what the states need in assistance from USDA to improve marketing service activities,



listed: (1) a central organization to promote workshops such as have been held the past two years and "which are extremely important and useful" and (2) two or three men in the Department to devote their time to field service work done in the States and keep in touch with State and Federal marketing research to call it to the attention of all States.

John Winfield, Director, Division of Markets, North Carolina, endorsed a coordinated marketing program at all levels between the Experiment Stations, the Extension Service, State Departments of Agriculture and other agencies interested in marketing agricultural products. He praised the Agricultural Marketing Act of 1946 for its contribution in bringing all agencies together to improve agricultural marketing.

Mancil J. Vinson, Director, Division of Markets, Kentucky, listed criteria for determining the kind of marketing service work most needed in a State as: Purpose or aim of the work; characteristics and needs of agencies involved; surroundings or conditions which will influence program operations; study of available references, research and information on the problem and changes necessary to obtain effective marketing.

A. G. Moffett, Supervisor, Market Expansion Section, Virginia Division of Markets, stressed the importance of proper reporting of progress in marketing service work and the opportunity for leadership at the local level to blend industry and farmer interest in the work. He urged the State people to accept the opportunity for this leadership, explaining: "Our leadership will determine our usefulness in improving marketing."

#### Market News, Grading and Inspection

A concluding panel discussion entitled "A Glimpse of the New, the Changed or the Threatening" was under the leadership of C. D. Schoolcraft, Chief, Market News Branch, Fruit and Vegetable Division, AMS. He explained current fruit and vegetable market news programs and plans for expansion, adding that an intensified program of Federal-State cooperation in this field could be expected with appropriations for expansion contingent upon matching funds from the States.

Bernard W. Kempers, Poultry Division, AMS, explained changes in poultry, egg and egg products grading regulations that took place early this year and noted that a proposed change in egg weights, scheduled to become effective January 1, 1956, would be reconsidered this summer. He told the State marketing officials that they could help in poultry marketing in their States by teaching their processors to "style" their packaging, particularly ready-to-cook products. He added that present cooperative agreements for grading poultry products are being modernized and would be discussed with the individual States this calendar year.

E. E. Conklin, Chief, Fresh Products Standardization and Inspection Branch, Fruit and Vegetable Division, AMS, reported on activities of his organization and efforts to develop mechanical aids to make grading work more uniform. He said that while a pending appropriation for terminal market inspection fees might indicate that they would not be increased, this could be changed by an also pending Federal pay raise.

OFFICIAL BUSINESS

Jason Barr, Chief, Inspection Branch, Grain Division, AMS, described the permissive inspection service of that agency and agreements that have been worked out for hay inspection. He said that among the pending problems of the organization are sanitary measures to control rodent and weevil contamination and infestation of grain.

In the following discussion, Mr. Winfield pointed out that unless chain stores are buying on terminal markets price reports from those markets for fruits and vegetables, eggs and other products are not a true indication of prices. Some of the State officials explained that they are already getting information from the chains on prices paid in direct purchases from producers.

Hermon Miller, Director, Poultry Division, AMS, called the attention of the marketing men to the growth of State and local regulations and ordinances governing sanitary conditions in poultry processing. He urged the market officials to watch this since "processing sanitation is a marketing service" and "unsound sanitary programs could hinder rather than help poultry marketing."

Mr. Meek held that State marketing agencies already had lost control of sanitary procedures in poultry processing plants. He said that it must be realized that it was now in the "hands of the health people just because it wasn't handled right." Mr. Meek also urged that more attention be given to television in the dissemination of market news.

In an executive session following the conference, the Atlantic States group of NAMO elected James E. Youngblood, Director, South Carolina State Agricultural Marketing Commission, Chairman, and Mr. Nystrom of Maryland, Secretary, for the coming year.